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Technology Center 2100

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/712,101
Filing Date: November 14, 2000
Appellant(s): CARNEY, STEPHEN

Dan C. Hu
For Appellant

REVISED EXAMINER'S ANSWER

This Revised Examiner's Answer is in response to the Supplemental Appeal Brief filed 12/09/2005 appealing from the Office action mailed 10/26/2004.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,412,004	CHEN ET AL.	06-2002
6,360,262	GUENTHNER ET AL.	03-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 2, 4-12 and 21-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6,412,004), hereinafter "Chen", in view of Guenthner et al. (US 6,360,262), hereinafter "Guenthner".

3. As to claim 4, **Chen** teaches a distributed streaming media server system, comprising:

a plurality of streaming media servers *(i.e., a plurality of multimedia servers 340 as illustrated in Fig. 3)* that each store a selection of multimedia files **(Chen, Fig. 3)**;

a master streaming media server communicatively coupled to the plurality of streaming media servers *(i.e., a metaserver 350 communicating with the plurality of multimedia servers 340 as illustrated in Fig. 3)* and that compiles mapping information regarding a location of each of the multimedia files that are stored on each of the plurality of streaming media servers *(i.e., the metaserver 350 comprises a metaserver database which includes information about the video data streams stored in each multimedia server as illustrated in Fig. 11)* **(Chen, Figs. 3 and 11, col. 5, lines 46-54, col. 6, lines 6-10 and lines 31-48)**; and

at least one streaming media client that requests access to a multimedia file through the master streaming media server and receives setup information regarding the requested multimedia such that the at least one streaming media client may directly access the multimedia file from one of the plurality of streaming media servers *(i.e., at least one client computer 360 of Fig. 3 that requests access to a multimedia file through the metaserver 350 and receives a list of eligible servers that have the requested multimedia file such that the client computer 360 may direct access the multimedia file)* **(Chen, col. 6, lines 41-48 and col. 10, lines 21-31)**.

However, **Chen** does not explicitly teach wherein the at least one streaming media client receives the setup information from one of the plurality of streaming media servers.

In an analogous art, **Guenthner** teaches a system and method of routing in a computer network having a pool of servers operating in the "handoff" mode, capable of servicing requests for access to a set of server resource objects *(i.e., a plurality of streaming media servers capable of servicing requests for access to multimedia files)* as shown in Fig. 4B, wherein the Resource Router *(i.e., the master streaming media server)* receives the client initial request (**step 1**), selects the most appropriate server *(e.g., selecting server S1)* and forwards the request to the server S1 (**step 2**). The server S1 sends its response *(i.e., sending setup information)* directly to the client (**step 3**) and the client dialogs with the server for subsequent access to the requested multimedia file (**step 4**) **(Guenthner, Fig. 4B and col. 4, line 64 – col. 5, line 12)**.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of **Chen** and **Guenthner** to have the at least one streaming media client receiving the setup information from one of the plurality of streaming media servers, since both references are directed to providing server resource objects (e.g., multimedia files) to requested clients in client/server environment, hence, would be considered analogous based on their related fields of endeavor.

One would be motivated to do so to allow the system to select the "best provider" *(i.e., the most appropriate server)* and redirect/forward the client request to the selected server as operating in "handoff" mode, based on the object of the request, to provide enhanced availability, responsiveness and load-balancing for client requests to object access across multiple servers **(Guenthner, col. 4, lines 5-10 and col. 8, lines 20-25)**.

4. As to claim 2, **Chen-Guenthner** teaches the server system of claim 4, wherein the multimedia files comprise video files **(Chen, Video content 1030 of Fig. 11)**.

5. As to claim 5, **Chen-Guenthner** teaches the server system of claim 4, wherein the request for access to the multimedia file by the at least one streaming media client is multiplexed *(multiplexed through the network 310, i.e., the Internet)* **(Chen, Fig. 3)**.

6. As to claims 6-8, **Chen-Guenthner** teaches the server system of claim 4, wherein the master streaming media server considers load balancing when determining which of the plurality of streaming media servers is selected for access by the at least one streaming media client *(i.e., the metaserver 350 selects the proper algorithm to balance the load such as by measuring how busy each multimedia server is and how close a particular client is to each multimedia server with the proper content, etc.)* and the master streaming media server includes a load poll thread, a load average queue, and load average threads to determine the load balancing among a plurality of streaming media servers *(i.e., the metaserver 350 periodically communicates with each multimedia server to receive its status information such as number of current connections and multimedia content)* **(Chen, col. 7, lines 1-38)**.

7. As to claim 9, **Chen-Guenthner** teaches the server system of claim 4, wherein the master streaming media server selects one of the plurality of streaming media

servers different from the master streaming media server to access for the requested multimedia file and redirects the requesting client to exchange information directly with one of the plurality of streaming media servers *(**Guenthner** teaches the Resource Router receives the client initial request **(step 1)**, selects the most appropriate server S1 and forwards the request the server S1 **(step 2)**. The server S1 sends its response (i.e., setup information) directly to the client **(step 3)** and the client dialogs with the server for subsequent access to the requested multimedia file **(step 4))* **(Guenthner, Fig. 4B and col. 4, line 64 – col. 5, line 12)**. The same motivations regarding the obviousness of claim 4 is applied equally well to claim 9.

8. As to claim 10, **Chen-Guenthner** teaches the server system of claim 4, wherein the master streaming server utilizes a logical content database *(i.e., the metaserver 350 utilizes metaserver database 940 which includes information about the video data streams stored in each multimedia server 340)* that is queried by the master streaming media server to identify which of the plurality of streaming media servers possesses a specific streaming media file that fulfills a request for the specific streaming media file originating from the at least one streaming media client **(Chen, col. 6, lines 6-48)**.

9. As to claims 11-12, Chen-Guenthner teaches the server system of claim 4, wherein the at least one streaming media client, the master streaming media server, and one of the plurality of streaming media servers utilize a connectionless and stateless communications protocol *(as TCP/IP)* **(Chen, col. 3, line 62 – col. 4, line 15)**.

10. Claims 21-27 are corresponding method claims that contain similar limitations as distributed streaming media system claims 2 and 4-12; therefore, they are rejected under the same rationale.

11. Claims 28-32 are corresponding system claims that contain similar limitations as distributed streaming media server system claims 2 and 4-12; therefore, they are rejected under the same rationale.

12. As to claim 33, **Chen-Guenthner** teaches the server system of claim 5, wherein the streaming media server from which the at least one streaming media client receives the setup information is separate from the master streaming media server *(**Guenthner** teaches the Resource Router receives the client initial request **(step 1)**, selects the most appropriate server S1 and forwards the request the server S1 **(step 2)**. The server S1 sends its response (i.e., setup information) directly to the client **(step 3)** and the client dialogs with the server for subsequent access to the requested multimedia file **(step 4))*** **(Guenthner, Fig. 4B and col. 4, line 64 – col. 5, line 12)**. The same motivations regarding the obviousness of claim 4 is applied equally well to claim 33.

(10) Response to Argument

(**A**) *"Appellant respectfully submits that the Examiner has failed to establish a prima facie case of obviousness because there was no motivation or suggestion to combine the teachings of Chen and Guenthner to achieve the claimed invention."* (see page 5 of the Appeal Brief).

As to point (**A**), in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, **Chen** teaches a distributed media server system, comprising:

a plurality of streaming media servers *(i.e., a plurality of multimedia servers 340 as illustrated in Fig. 3)* that each store a selection of multimedia files **(Chen, Fig. 3)**;

a master streaming media server communicatively coupled to the plurality of streaming media servers *(i.e., a metaserver 350 communicating with the plurality of multimedia servers 340 as illustrated in Fig. 3)* and that compiles mapping information regarding a location of each of the multimedia files that are stored on each of the plurality of streaming media servers *(i.e., the metaserver 350 comprises a metaserver database which includes information about the video data streams stored in each multimedia server as illustrated in Fig. 11)* **(Chen, Figs. 3 and 11, col. 5, lines 46-54, col. 6, lines 6-10 and lines 31-48)**; and

at least one streaming media client that requests access to a multimedia file through the master streaming media server and receives setup information regarding the requested multimedia such that the at least one streaming media client may directly access the multimedia file from one of the plurality of streaming media servers *(i.e., at least one client computer 360 of Fig. 3 that requests access to a multimedia file through the metaserver 350 and receives a list of eligible servers that have the requested multimedia file such that the client computer 360 may direct access the multimedia file)* **(Chen, col. 6, lines 41-48 and col. 10, lines 21-31)**.

However, **Chen** does not explicitly teach wherein the at least one streaming media client receives the setup information from one of the plurality of streaming media servers.

In an analogous art, **Guenthner** teaches a system and method of routing in a computer network having a pool of servers operating in the "handoff" mode, capable of servicing requests for access to a set of server resource objects *(i.e., a plurality of streaming media servers capable of servicing requests for access to multimedia files)* as shown in Fig. 4B, wherein the Resource Router *(i.e., the master streaming media server)* receives the client initial request (**step 1**), selects the most appropriate server *(e.g., selecting server S1)* and forwards the request to the server S1 (**step 2**). The server S1 sends its response *(i.e., sending setup information)* directly to the client (**step 3**) and the client dialogs with the server for subsequent access to the requested multimedia file (**step 4**) **(Guenthner, Fig. 4B and col. 4, line 64 – col. 5, line 12)**.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of **Chen** and **Guenthner** to have the at least one streaming media client receiving the setup information from one of the plurality of streaming media servers, since both references are directed to providing server resource objects (e.g., multimedia files) to requested clients in client/server environment, hence, would be considered analogous based on their related fields of endeavor.

One would be motivated to do so to allow the system to select the "best provider" *(i.e., the most appropriate server)* and redirect/forward the client request to the selected server as operating in "handoff" mode, based on the object of the request, to provide enhanced availability, responsiveness and load-balancing for client requests to object access across multiple servers **(Guenthner, col. 4, lines 5-10 and col. 8, lines 20-25)**.

Examiner respectfully submits that the motivations regarding the obviousness of claim 4 given above to combine the teachings of **Chen** and **Guenthner** is sufficient.

Also, Examiner respectfully submits that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

(**B**) *"Appellant respectfully submits that the Examiner has also failed to establish a prima facie case of obviousness with respect to independent claims 21 and 28."* (see page 9 of the Appeal Brief).

As to point (**B**), Examiner respectfully submits that claims 21-32 are corresponding method and system claims that contain similar limitations as distributed streaming media server system claims 2 and 4-12; therefore, they are rejected under the same rationale (see point (**A**) above).

(**C**) *"However, there is not suggestion in Chen that the metaserver includes a load poll thread, a load average queue, and load average threads to determine load balancing among a plurality of streaming media servers."* (see page 11 of the Appeal Brief).

As to point (**C**), **Chen** teaches the metaserver 350 **selects the proper algorithm to balance the load such as by measuring how busy each multimedia server is** *(i.e., load poll thread)* and how close a particular is to each multimedia server with proper content, etc. Also, **Chen** teaches the metaserver 350 **periodically communicates with each multimedia server to receive its status information such as number of current connections** and multimedia content to determine the "appropriate provider" to serve the client request **(Chen, col. 7, lines 1-38)**.

Examiner respectfully submits that one of ordinary skill in the art at the time the invention would have readily found that Chen's teaching of **selecting the proper algorithm to balance the load by measuring how busy each multimedia server is** *(i.e., polling the multimedia server to get the load poll thread)* and **periodically communicating with each multimedia server to receive its status information such as number of current connections** *(which could be used to calculate the load average queue/threads)* to determine the "appropriate provider" to serve the client request.

Hence, Examiner respectfully submits, after consideration of the prior art records, that the evidence relied upon and the level of skill in the art would have suggested to the ordinary skilled artisan the claimed invention as set forth in claim 8.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Quang N. Nguyen

Conferees:

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